

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

Alexandria Division

**VIRGINIA INNOVATION SCIENCES,
INC.,**

Plaintiff,

V.

AMAZON.COM, INC.,

Defendant.

Civil No. 1:16-cv-00861

Hon. Liam O'Grady

MEMORANDUM OPINION

Plaintiff Virginia Innovation Sciences, Inc. (“VIS”) owns the rights to a family of patents that cover a method, system, and apparatus for transferring video signals from a network to a mobile device and then converting those signals in a manner that allows them to be reproduced on an “alternative display terminal” (e.g., a television). Alleging infringement of these patents, Plaintiff brought suit against Defendant Amazon.com, Inc. (“Amazon”) for marketing and selling, among other things, its Amazon Fire TV and Fire Stick devices, smartphone, mobile phone, and tablet products. Amazon has moved to dismiss the claims related to eight of the ten patents at issue in this case. (Dkt. No. 21). The court heard oral argument on October 14, 2016. For the reasons that follow, the Court finds that VIS’s patents are not directed to patent-eligible subject matter under 35 U.S.C. § 101, and it therefore **GRANTS** Amazon’s motion to dismiss.

I. BACKGROUND

VIS owns all rights and title to, and interest in, U.S. Patent No. 7,899,492, entitled “Methods, Systems, and Apparatus for Displaying the Multimedia Information from Wireless

Communication Networks” (the “’492 patent”). It also is the owner of all rights and title to, and interest in, seven related patents: U.S. Patent No. 8,050,711 (the “’711 patent”); U.S. Patent No. 8,903,451 (the “’451 patent”); U.S. Patent No. 8,948,814 (the “’814 patent”); U.S. Patent No. 9,118,794 (the “’794 patent”); U.S. Patent No. 8,712,471; U.S. Patent No. 9,286,853 (the “’853 patent”); and U.S. Patent No. 9,355,611 (the “’611 patent”). Collectively, these eight patents make up the “’492 patent portfolio” or “’492 patent family”.

In addition, VIS is the owner of all rights and title to, and interest in U.S. Patent No. 9,369,844, entitled “System and Method for Providing Locally Applicable Internet Content with Secure Action Requests and Item Condition Alerts” (the “’844 patent”), and U.S. Patent No. 8,135,398, entitled “Method and Apparatus for Multimedia Communications with Different User Terminals” (the “’398 patent”). VIS also owns U.S. Patent No. RE 46,140, entitled “Method and System for Conducting business in a transnational e-Commerce Network” (the “’140 patent”), which was issued after the initiation of this lawsuit.¹ VIS asserts infringement of all 10 patents, but Amazon does not challenge the ’844 patent, the ’398 patent, or the ’140 patent in the instant motion.

The ’492 patent was filed on June 24, 2005 and issued on March 1, 2011. The Complaint describes the patent in general terms before moving to specifics; it states:

The ’492 Patent Portfolio generally discloses systems and methods for converting video signals for a mobile terminal to accommodate reproduction by an alternative display terminal. To achieve this result, the video signal from a wireless communication network is processed to provide a converted video signal appropriate for an alternative display terminal. This converted video signal is then provided to accommodate the corresponding video display on a screen provided by the alternative (*e.g.*, external) display terminal.

¹ Pursuant to this Court’s November 2, 2016 Order, Plaintiff was granted leave to amend its complaint to include infringement claims under the ’140 Patent. Dkt. No. 48; *see* Am. Compl., Dkt. No. 44-1. Under the terms of that Order, Amazon is permitted 14 days from the issuance of this Opinion to respond to that Amended Complaint. Plaintiff has also notified the Court that the USPTO has allowed a continuation of the ’492 patent. *See* Dkt. No. 56.

Compl. ¶ 14.

Exemplary Claim 23 of the '492 patent recites:

23. An apparatus for processing signals to accommodate reproduction by an alternative display terminal, the apparatus comprising:

an interface module, which receives a video signal appropriate for displaying video content on a mobile terminal, the video signal being received from a cellular network communication that is sent to the mobile terminal and then received by the interface module;

a signal conversion module, in operative communication with the interface module, which processes the video signal to produce a converted signal for use by the alternative display terminal, wherein processing by the signal conversion module includes converting the video signal from a compression format appropriate for the mobile terminal to a display format for the alternative display terminal that is different from the compression format, such that the converted video signal comprises a display format and a power level appropriate for driving the alternative display terminal; and

a device interface module, in operative communication with the signal conversion module, which provides the converted video signal to the alternative display terminal to accommodate displaying the video content by the alternative display terminal.

The '492 patent includes a graphical depiction of the claimed invention:

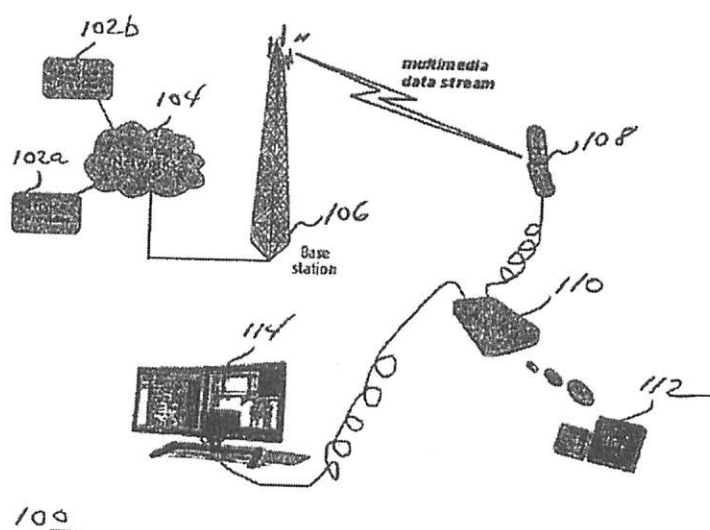


FIG. 1

The depiction shows a network system (104) that produces a signal which is transmitted from the base station (106) to the mobile terminal device (108). From the mobile terminal device, the signal is transmitted to the mobile signal conversion module (“MTSCM” or “intermediary device”) (112), which is contained in “housing” (110). The MTSCM converts the mobile signal into a power level and display format that is compatible with the display monitor (114), which reproduces the original signal.

Phrased in non-technical terms, the claimed idea: (1) takes a video feed from a mobile network (*e.g.*, Verizon, AT&T, T-Mobile, etc.); (2) sends it to a mobile device that; (3) sends it to an intermediary device, which (4) converts the signal; and (5) displays it on a TV in your home. All of the asserted patents claim some form of this same invention.² As an additional example, Claims 28-33 of the '814 are reproduced in their entirety below:

28. An apparatus comprising:

an input interface configured to receive a multimedia signal through a wireless local area network, wherein the multimedia signal is a compressed digital signal;

at least one processing unit configured to perform a processing of the multimedia signal, wherein the processing of the multimedia signal comprises decompressing the compressed digital signal to a decompressed digital signal, wherein the processing of the multimedia signal further comprises encoding the decompressed digital signal to produce an encoded digital signal, and wherein the encoded digital signal comprises a decompressed high definition digital video signal; and a high definition multimedia interface configured to transmit the encoded digital signal to a high definition digital display;

wherein the apparatus is configured to interface with a wired connection to

² For the purposes of the eligibility determinations, there are no material differences in the claims of the individual patents in the '492 patent family. Therefore, to avoid repetition, the patents are addressed as a family. For reference purposes, a list of exemplary independent claims follows: (1) Claim 21 of the '711 Patent; (2) Claim 21 of the '471 patent; (3) Claim 30 of the '451 patent; (4) Claim 1 of the '814 patent; (5) Claim 1 of the '794 patent; (6) Claim 1 of the '853 patent; (7) Claim 1 of the '611 patent; and (8) Claim 23 of the '492 patent.

receive power through the wired connection while the encoded digital signal is transmitted to the high definition digital display through the high definition multimedia interface; and

wherein the power received contributes power for said processing of the multimedia signal.

29. The apparatus of claim 28 further comprising a decoder, wherein the decoder is configured to perform said decompressing the compressed digital signal to the decompressed digital signal, and wherein the apparatus further comprises an encoder, wherein the encoder is configured to perform said encoding the decompressed digital signal to produce the encoded digital signal for transmission to the high definition digital display; wherein a maximum throughput rate for transmitting the encoded digital signal through the high definition multimedia interface is at least 10 Gigabits/second.

30. The apparatus of claim 29, wherein the power is received during said processing of the multimedia signal.

31. The apparatus of claim 30, wherein the maximum throughput rate supports said transmitting the encoded digital signal in real time.

32. The apparatus of claim 30, wherein the multimedia signal is received from a mobile terminal through the wireless local area network; and wherein the apparatus is an intermediate device between the mobile terminal and the high definition digital display; and wherein the mobile terminal is a cellular phone or a personal digital assistant (PDA).

33. The apparatus of claim 32, wherein the input interface receives the multimedia signal after the multimedia signal is wirelessly received by the mobile terminal.

II. PROCEDURAL HISTORY

Although VIS filed this complaint in July 2016, the '492 patent family has a history of related proceedings. In 2013, VIS sued Samsung for infringement in the Eastern District of Virginia. *Virginia Innovation Sciences, Inc. v. Samsung Electronics Co.*, 983 F. Supp. 2d 713 (E.D. Va. 2014). After a claim construction hearing and an adverse non-infringement ruling, VIS appealed to the Federal Circuit. *Virginia Innovation Sciences, Inc. v. Samsung Electronics Co.*, 614 Fed. App'x 503 (Fed. Cir. 2015). The Federal Circuit reversed, writing that:

[A]lthough the intrinsic evidence strongly suggests that the claimed ‘display format’ must be a video signal that is ‘ready for use’ by a conventional external monitor, the intrinsic evidence before us does not provide a complete understanding of the term. Thus, while review of the intrinsic evidence is commonly dispositive in understanding the ordinary meaning of a claim, such is not the case in this particular instance. For example, the specification does not provide an explanation of what separates a video signal that is ‘ready for use’ by an external monitor from a video signal that is not. Nor does the specification explain what type of additional processing an external monitor may perform on a signal in a ‘display format’ in order to display the video content within that signal.

Id. at 510. Thus, the Federal Circuit determined that it could not construe the term “display format” on the record before it and therefore remanded the case. The parties settled on remand.

While litigating that case, Samsung petitioned the U.S. Patent and Trademark Office (“USPTO”) for *inter partes* review of the ’492 patent, the ’711 patent, and the ’471 patent. The USPTO denied the institution of *inter partes* review for all three patents. Under 35 U.S.C. § 311, the request for *inter partes* review examined whether the patent claims could be cancelled “on a ground that could be raised under [35 U.S.C. §§102 or 103] and only on the basis of prior art consisting of patents or printed publications.” Applying this standard, the USPTO found that none of challenged ’492 family’s patents were obvious under the prior art. In particular, the USPTO found that they were novel over Palin (U.S. Patent No. 7,580,005), which claims “a system . . . for transmitting an image from a first display device having certain display capabilities to a second display device having different display capabilities.” The USPTO ruled that, because “isolating and reassembling one or more external display device . . . as a Bluetooth packet does not alter the ‘format’ of the video signal contained therein,” the ’492 patent family’s conversion of the video signal constituted an improvement over the prior art. Opp’n, Ex. 7 at 13 (Dkt. No. 36). In short, Palin did not teach the ’492 patent family’s “conversion to a display format . . . that is different from the compression format.” *Id.*, Ex. 6 at 14. As such, the

teachings of the '492 patent family were found novel and not obvious under 35 U.S.C. §§102 and 103.

Finally, VIS brought suit against HTC Corporation in February 2016. That case was transferred from the Eastern District of Virginia's Norfolk division to its Alexandria division in October 26, 2016. It is now pending before the Court. *See* Transfer Order, *Virginia Innovation Sciences, Inc. v. HTC Corp.*, 1:16-cv-01350 (E.D. Va. October 26, 2016), Dkt. No. 51.

III. LEGAL STANDARD

On a motion to dismiss, the plaintiff must provide sufficient facts to show that it has stated a "plausible claim for relief." *Ashcroft v. Iqbal*, 556 U.S. 662, 679 (2009). At this stage, courts must accept all facts as true, but should not give weight to purely legal conclusions. *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007); *United States ex rel. Oberg v. Pa. Higher Educ. Assistance Agency*, 745 F.3d 131, 136 (4th Cir. 2014).

Patent eligibility under 35 U.S.C. § 101 is a question of law. *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015). Therefore, when the "basic character of the claimed subject matter is readily ascertainable from the face of the patent," courts may determine patent-eligibility at the motion to dismiss phase. *See Internet Patents Corp. v. Gen. Auto. Ins. Servs., Inc.*, 29 F. Supp. 3d 1264, 1268 (N.D. Cal. 2013), *aff'd sub nom. Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343 (Fed. Cir. 2015); *see also Fairwarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089 (Fed. Cir. 2016). Courts have thus recognized that a "plausible claim for relief in a patent infringement case necessarily requires a valid patent. [Without one,] there can be no infringement." *Intellectual Ventures I LLC v. Erie Indem. Co.*, No. 2:14-CV-220, 2016 WL 4147300, at *3 (W.D. Pa. Aug. 4, 2016) (citing *In re Bilski*, 545 F.3d 943, 851 (Fed. Cir. 2008), *aff'd sub nom Bilski v. Kappos*, 561 U.S. 593 (2010)).

IV. DISCUSSION

Patent eligibility is determined by 35 U.S.C. § 101, which states: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvements thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” Courts have read this provision to contain implicit exceptions for abstract ideas, laws of nature, and natural phenomena. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2354 (2014) (citation omitted). These three exceptions are the “basic tools of scientific and technological work . . . [and] monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it . . .” *Id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012)).

In a trilogy of recent cases, the Supreme Court has set forth the legal framework for assessing the scope of the exceptions. *See Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2354 (2014). Under this framework, the § 101 eligibility inquiry proceeds in two steps. *Alice Corp.*, 134 S.Ct. at 2355. First, the court determines whether the patents at issue are directed to an abstract idea, law of nature, or natural phenomenon. *Id.* If they are not directed to one of these excepted classes of subject matter, the inquiry ends. *Id.* If their focus is on one of these categories, however, the court proceeds to the second step, where it “consider[s] the elements of each claim both individually and as an ordered combination to determine whether the additional elements provide an ‘inventive concept’ that ensures the patent “in practice amounts to significantly more than a patent upon the [abstract idea] itself.” *Id.* (quotations and citations omitted). If the claims do not sufficiently narrow the

scope of the patent by providing this “inventive concept,” then the patent is rendered ineligible. *Id.*

Alice helps clarify this two-step test in the context of abstract ideas. The patent in that case covered a computerized method for mitigating settlement risk. Specifically, the claimed process “facilitate[d] the exchange of financial obligations by using a computer system as a third-party intermediary.” *Id.* at 2352. At step one, the court found that, like mathematical equations and algorithms, mitigating transactional risk through intermediated settlements was an abstract idea that covered too broad a swath of human activity to be patent-eligible.

Moving to step two, the *Alice* Court held that performing intermediated settlements on a generic computer was not sufficient to establish an inventive concept. It explained that, “limiting the use of an abstract idea to a particular technological environment” will not save a patent that is otherwise directed to an abstract idea. *Id.* at 2358 (quotations and citations omitted). Nor will including “well-understood, routine, [or] conventional activities previously known to the industry” in the patent claims. *Id.* at 2359. The patent must do more than recite an abstract idea and say “apply it.” *Id.* In order to survive an eligibility inquiry, the patent’s claims must narrow the abstract idea enough to avoid “the preemption concern that undergirds our § 101 jurisprudence.” *Id.* at 2358.

A. The Eligibility Framework

Articulating the scope of a patent’s subject matter is not a precise science. Courts must be careful not to overgeneralize claims because, “if carried to its extreme, [it would make] all inventions un-patentable because all inventions can be reduced to underlying principles of nature.” *Diamond v. Diehr*, 450 U.S. 175, 189 n.12 (1981). On the other hand, the judicial inquiry should endeavor to root out creative “drafting effort[s] designed to monopolize the

[abstract idea].” *Alice*, 134 S.Ct. at 2357. Therefore, at step one, the question is not whether the patent’s claims involve or relate to an abstract principle, but instead whether the “character as a whole” or the *focus* of the claims center on an abstract idea. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016); *see also Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). In cases where the patent’s precise character or focus is difficult to determine, courts will often move to the “inventive concept” inquiry without articulating the patent’s “character as a whole.” *See Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (finding that examining specific claim language in step two may help inform the focus of the patent under step one); *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) (deciding that the claims were patent-eligible without first discussing whether they were directed to an abstract idea).

Three recent cases in the Federal Circuit illustrate the application of these principles at step one.³ In one case, the court considered whether a software patent covering a “self-referential database” constituted an abstract idea. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). In holding that the patent’s idea was not abstract, *Enfish* highlighted that the focus and character of the patent was directed to improving spreadsheets from the prior model of “relational databases.” *Id.* at 1330. The court explained the improvement that the patent provided: “[w]ith the relational model, each entity (i.e., each type of thing) that is modeled is provided in a separate table.” *Id.* By contrast, the self-referential model allowed all of the information in the database to be contained and displayed in a single table. Thus, the patent addressed the software-specific inefficiencies that had previously existed in referential databases.

³ The Federal Circuit has given teeth to *Alice*’s guidance. In the two years following the decision, the Federal Circuit invalidated 34 of the 37 patent appeals that came before it on § 101 challenges. *See Jasper L. Tran, Two Years After Alice v. CLS Bank*, 98 J. Pat & Trademark Off. Soc’y 354, 355 (2016) (reviewing the Federal Circuit cases interpreting *Alice*). As such, the cases in which patents were upheld as directed to patent-eligible subject matter are often the most instructive because they help set the boundaries of § 101 invalidity determinations.

“The plain focus of the claims [was] on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity.” *Id.* at 1336. In other words, by finding the patent valid, the court suggested the patent’s narrow focus on the functionality of a database meant that the claims would not monopolize an entire area of software development.

In another recent case, the Federal Circuit resolved an eligibility challenge at step one of the framework. *See McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). The patents at issue in *McRO* claimed a method for automating 3-D animated lip synchronization. It did this through an “ordered combination of claimed steps, using unconventional rules that relate subsequences of phonemes, timings, and morph weights sets.” *Id.* at 1302–03. Evaluating the eligibility of this patent, the Court focused on the order of the claims and placed great weight on the fact that the “first set of rules” was defined by specific characteristics, and that this set of rules was then used throughout the additional steps in the claimed method. *Id.* at 1311. Thus the “exemplary rule” upon which the rest of the method relied did not encompass “all rules” but only a specific “genus” of rules. *Id.* at 1313–14 (citing cases concerning biological patents for the genus of species, which implicate eligibility-type preemption concerns, but which are more frequently invalidated for indefiniteness under 35 U.S.C. § 112). Similar to *Enfish*, the saving grace in *McRO* was the fact that not “all rules” were claimed by the patent. Instead, analogizing the patented method to a patent on a biological genus, the court found that the rules in *McRO* were sufficiently specific to rebut Defendant’s assertions that the patent claimed an abstract idea.

Contrast these cases with the facts of *In re TLI LLC Patent Litigation*, 823 F.3d 607 (Fed. Cir. 2016). There, the patent at issue “relate[d] generally to an apparatus for recording of a

digital image, communicating the digital image from the recording device to a storage device, and to administering the digital image in the storage device.” *Id.* at 609 (quoting the patent at issue). Put simply, the claims were directed to storing and organizing digital photos. *Id.* In finding that this constituted an abstract idea, the Federal Circuit noted that the patent did not claim any new technology, but instead “describe[d] the system and methods in purely functional terms.” *Id.* at 612. In other words, “the specification [did] not describe a new telephone, a new server, or a new physical combination of the two.” *Id.* As such, the case was not like *Enfish* where the patent improved the computer functionality itself. *Id.* Instead, it “simply add[ed] conventional computer components to a well-known business practice,” included “a purely conventional computer implementation of a mathematical formula,” or listed generalized steps to be performed on a computer using conventional computer activity. *Id.* at 612 (quoting *Enfish* 822 F.3d at 1338). As such, *TLI* affirms *Alice*’s instruction that implementing an abstract idea on conventional technology will not save a patent from an ineligibility determination.

In some cases, courts will defer ruling on step one and proceed to the “inventive concept” inquiry without articulating the “focus” of the patent. This allows courts to determine whether the specific claim limitations narrow the claims enough to save them from being classified as abstract in the first instance. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (“[T]he two stages are plainly related: not only do many of our opinions make clear that the two stages involve overlapping scrutiny of the content of the claims, but we have noted that there can be close questions about when the inquiry should proceed from the first stage to the second.”) (citations omitted).

Bascom serves as a useful example of this practice. In that case, the patent dealt with an Internet filter that was “able to provide individually customizable filtering at the remote ISP server by taking advantage of the technical capabilities of certain communication networks.” *Id.* at 1344. The Federal Circuit therefore considered the question of whether the claims were directed to the admittedly abstract idea of “filtering content on the internet” or instead to the narrower version of content filtering that drew on specific server characteristics. *Id.* at 1348. In holding that the claims were patent-eligible, the court focused on the narrow improvements that the patent made to the existing art. Specifically, the invention made internet filtering “more dynamic and efficient” by providing a “software-based invention that improves the performance of the computer system itself.” *Id.* at 1351. As such, it did not preempt a broad range of solutions, but was instead tailored to a specific problem and was cabined to the resolution of that problem. Importantly, the patent also used specific software to achieve its desired result.

In a similar opinion, the court analyzed § 101 in the context of an invention that claimed a technical solution to an Internet problem—websites instantly losing views when the user clicked an embedded link on the site. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). To resolve this problem, the patent claimed a process for creating a hybrid website that “combines visual ‘look and feel’ elements from the host website and product information from the third-party merchant’s website related to the clicked advertising.” *Id.* at 1257. In *DDR*, the Court did not adopt the Defendant’s suggestion that the claims were directed to the abstract goal of “maintaining customers” in a way that was merely applied to Internet technology. *Id.* at 1257. Instead, it reasoned that “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.* Hence, *DDR* and *Bascom* stand for the principle that when claims

relating to an abstract idea address a specific Internet-centric problem and do not unduly preempt other solutions to that problem, they likely satisfy the “inventive concept” requirement embodied by step two of the *Alice/Mayo* test. *Id.* at 1259.

The line between computer-centric problems and commonplace business problems is often blurred in the context of Internet commerce. Nonetheless, courts have definitively stated that an otherwise abstract idea is not rendered patent-eligible by reciting general purpose technological components. *Alice*, 134 S. Ct. at 2357 (holding that the introduction of a computer into the claims does not render the idea patent-eligible); *see also Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed.Cir. 2014) (finding that claims which merely recited the abstract idea of using advertising as a currency as applied to the particular technological environment of the Internet were not patent-eligible). In the context of technological inventions, even “very detailed software implementation guidelines” in the patent specifications will not save systems claims that “only contained generalized software components arranged to implement an abstract concept on a computer.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013).

By way of example, in *Internet Patents Corp. v. Active Network*, the Federal Circuit considered whether “the use of a conventional web browser Back and Forward navigational functionalities without data loss in an online application consisting of dynamically generated web pages” was directed to patent-eligible subject matter. 790 F.3d 1343, 1344 (Fed. Cir. 2015). Despite the fact that the invention addressed a problem that arose in the specific context of the Internet (data loss during Internet browser navigation), the court noted that the mechanism for avoiding data loss was “not described, although this [was] stated to be the essential innovation.”

Id. at 1348. In other words, the claims recited an effect or result that was “dissociated from any method by which [the desired result] was accomplished.” *Id.*

TLI provides additional guidance at step two of the inquiry. 823 F.3d 607 (Fed Cir. 2016). Distilled to a principle, *TLI* holds that when claims are laid out in purely functional language and use conventional technology in a typical manner, they are not patent eligible. *Id.*; see also *Electric Power Grp.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (noting that result-focused, functional claim language is “a frequent feature of claims held ineligible under § 101”). In *TLI*, the court looked to each component in the claimed invention to determine whether it provided more than the performance of “well understood, routine, or conventional activities previously known to the industry.” *TLI*, 823 F.3d at 613 (citing *Alice*, 134 S.Ct at 2359) (internal quotations and alterations omitted). Finding that the claimed use of the telephone did not add an inventive concept, the court reasoned that “the telephone unit simply provides the environment in which the abstract idea of classifying and storing digital images . . . is carried out.” *Id.* at 614. Likewise, the server in the claimed invention did not perform any inventive tasks, but instead “simply receive[d] data, extract[ed] classification information from the received data, and stor[ed] the digital images, taking into consideration the classification information.” *Id.* (quotation marks omitted). Because the components of the claims did not recite inventive concepts on their own or in combination, the court held that the patents were directed to an abstract idea. *Id.*

The invalidation of purely functional claims is a consistent theme in the Federal Circuit’s recent § 101 jurisprudence. Since *TLI*, courts have held repeatedly that a patent-holder “must do more than merely show more than an unconventional idea, they must show an unconventional *embodiment* of that idea.” *Netflix, Inc. v. Rovi Corp.*, 114 F. Supp. 3d 927, 940 (N.D. Cal. 2015),

aff'd No. 2015-1917, 2016 WL 6575091 at *1 (Fed. Cir. Nov. 7, 2016) (emphasis in original); *see also Electric Power*, 830 F.3d at 1356 (highlighting “an important common-sense distinction between ends sought and particular means of achieving them, between desired results (functions) and particular ways of achieving (performing) them”). The step-two analysis ensures that inventors are still capable of patenting the innovative means of achieving an abstract idea. They may not, however, patent the ends, for that would amount to a patent on the idea itself.

B. The '492 Patent Family is Directed to an Abstract Idea

Preemption is the touchstone of the § 101 inquiry. At both stages of the *Mayo/Alice* test, the goal is to determine whether the claimed invention is so extensive as to “monopoliz[e] [the basic tools of scientific and technological work] through the grant of a patent [that] might tend to impede innovation more than it would tend to promote it . . .” *Alice*, 134 S. Ct. at 2354 (quoting *Mayo*, 132 S. Ct. at 1293). At step one, that question is taken at a broad level, examining the patent as a whole to see how wide a field of innovation the claimed invention could potentially preempt. Step two then zooms in to see whether that field is sufficiently narrowed by the specific claims in the patent. In this case, the '492 patent family's sweeping universe of preemption is its downfall.

1. Alice/Mayo Step One

At step one, the key question concerns the level of generality at which the court considers the “focus” of the patent claims. Amazon asserts that the patents are directed to “the abstract idea of sending video from a mobile device to a different screen.” In VIS's related case before this court, Defendant HTC phrased the concept differently, arguing that the claims were directed to the abstract idea of “converting data from one display format to another.” *See* Opp'n at 13 n.5 (citing Def's Mem. in Supp. of Mot. to Dismiss, *Virginia Innovation Sciences, Inc. v. HTC*

Corp., Civil Action No. 2:16-cv-60, (E.D. Va. May 4, 2016)). Both defendants argue that these definitions would dictate the conclusion that VIS's patent is directed to an abstract idea.

Even accepting Amazon's definition of the patent's focus, VIS argues that the covered concept is not abstract. Instead, it counters by asserting that sending video from a mobile device to a different screen was "neither abstract nor conventional when viewed through the prism of more than a decade ago." Opp'n at 13. Alternatively, VIS proposes a different purpose to which the patent was directed: "a specific asserted improvement in telecommunications—*i.e.*, a new machine with a novel architecture for presenting video content from a mobile device onto a high definition television using specific connectivity, interfaces, compression, decompression, encoding, wired and wireless communications, and other aspects." Opp'n at 15-16. Finally, VIS argues that Amazon's definition is superficial and fails to consider the distinct features of its patents' claims.

The irony of *Alice/Mayo* step one is that abstract ideas, by their nature, are often hard to define. See *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1228, 1294 (Fed. Cir. 2016) ("[A]t present there is no [] single succinct, usable definition or test" for determining what an abstract idea encompasses). Accordingly, it is difficult to zero-in on a precise articulation of what the '492 patent family is "directed to." Indeed, as the parties point out, multiple definitions may be technically accurate. Here, however, the guidance of *McRO* and *Enfish* is instructive. Those cases asked: what problem do the patents seek to resolve? In *McRO*, the problem was the labor-intensive process of animating lip sync videos. In *Enfish*, the patent resolved the inefficiencies in standard referential databases that required a separate table for each "entity." In both of those cases, the problem was narrow and "computer-centric" and the patents were therefore oriented to specific improvements in an existing computer process.

The '492 patent, on the other hand, is directed to the more generalized problem of reproducing a video from a mobile phone on a separate display device.⁴ Contrary to VIS's assertions, the other patents in the '492 patent family do not provide any additional claims that are meaningfully distinct from the idea claimed by the '492 patent. All of the patents are directed to the same three step process: (1) receiving data; (2) processing data; and (3) providing or displaying data. As described in the abstract of the '492 patent: "Video signals for a mobile terminal are converted to accommodate reproduction by an alternative display terminal." Though the '492 patent describes the technology used to achieve this function, the improvement itself is not computer-specific. Indeed, there is no software or algorithm specified in the patent. Thus, the language of the patent suggests that Amazon's articulation of the patent's subject matter accurately describes its general focus. This is supported by the fact that VIS does not meaningfully challenge Amazon's definition, but spends most of its briefing arguing that the idea is simply not abstract.

Using the practical touchstone of preemption as a guide, it is clear that converting a video signal for a mobile terminal to an "alternative display terminal" qualifies as an abstract idea. The '492 patent family's claims encompass every mobile telephone, every video signal received by that phone, and every HD display terminal sold on the market. As the background of the '492 patent recognizes, "[h]andheld mobile terminals (e.g. cellular phones, personal digital assistants (PDA)) continue to evolve both in terms of execution platform and functionality." The patents cover every one of these mobile terminals. Past, present, and future models are all swept up in this idea; so too are televisions and computer monitors from every commercial manufacturer. The only possible saving grace is the means of conversion or processing (compression and decompression through the MTSCM), however, the specifics of that function do not relate to the

⁴ See *supra*, n.1 for a list of exemplary independent claims in each of the patents.

characteristics of the patent *as a whole*. See *Enfish*, 822 F.3d at 1336. Indeed, the patents claim an entire multistep process: the signal is transmitted from the system network to the mobile device, to the MTSCM, and to the display device. Thus, the *focus* of the patents necessarily must be cast in broad terms in order to encompass all the claim limitations.

TLI clarifies that the '492 patent family claims an abstract idea. There, the invention recited a method for organizing and storing digital photos. The photos in *TLI* were recorded and transferred in a digital medium even though the idea of storing and organizing photos exists outside of the digital realm. Similarly, the multimedia data stream here is compressed and decompressed in a digital form, but that does not mean the process of transferring video from one screen to another is necessarily digital. One could imagine performing the same function through a projection or magnification device. Thus, just as transferring a video stream from one screen to another may or may not be done through a digital process, so too is photo organization something that can be done in either the physical or the digital world. Comparing this to the other recent cases, while *McRO* and *Enfish* are efforts to improve data processing, the patents in *TLI* and this case are only possible *because* of data processing. Therefore, they are akin to performing abstract ideas in a digital medium rather than creating solutions to computer-centric problems.

As a practical matter, VIS's arguments appear more suited to a step-two analysis. By delving into the detailed and specific components or specifications of the claims in its proposed definition of the patent's focus, VIS attempts to highlight the innovative concepts that it has added to the abstract idea of video conversion. Opp'n at 15–16 (defining the “idea” as “a new machine with a novel architecture for presenting video content from a mobile device onto a high definition television, using specific connectivity, interfaces, compression, decompression,

encoding, wired and wireless communication, power configurations, *and other aspects detailed below.*”) (emphasis added). Thus, as many courts have done, VIS blurs the line between the steps of the *Alice/Mayo* framework. Under the caselaw, this is an appropriate analytical approach, but it also requires that the court proceed to step two.

2. Alice/Mayo Step Two

The real substance of the § 101 test occurs at step two, but the touchstone of preemption remains the same. The underlying question guiding this legal framework is whether the patent’s specific claims are narrow enough to avoid preempting an entire field of innovation. In other words, do the claims remove the invention from the abstract and into the tangible world by patenting a means rather than an end? *See Electric Power*, 830 F.3d at 1356 (highlighting “an important common-sense distinction between ends sought and particular means of achieving them, between desired results (functions) and particular ways of achieving (performing) them”).

To answer this question, this section first addresses the threshold legal issue of the interaction between obviousness and patent eligibility. It then examines the specific claims relating to the MTSCM and the power supply of that device. Finally, it responds to a few remaining arguments from VIS and orients this case in the recent body of Federal Circuit precedent. After proceeding through this analysis, the Court concludes that none of the patents in the ’492 patent family claim an inventive concept and they are therefore directed to patent-ineligible subject matter under § 101.⁵

⁵ As in step one, the respective claims of the individual patents do not materially alter the Court’s analysis. Therefore, the patents are addressed as a family and excerpts of claim language is repeated from the separate patents only to the extent necessary to inform that analysis. *See supra*, n.1 for a list of exemplary claims in each challenged patent.

a. The Interaction Between Obviousness, Novelty, and Eligibility

Before moving to the specific claims, the parties' arguments present an interesting question about the overlap between patentability, obviousness and novelty. On the one hand, Defendant argues that the claimed "intermediary device" is cast in purely functional terms and therefore does not add any inventive concept to the abstract focus of the invention. On the other hand, Plaintiff claims that its invention was not abstract "when viewed from the prism of more than a decade ago." In addition, Plaintiff cites multiple opinions from the PTAB stating that the specifications of the intermediary device were not taught by the prior art and were therefore not obvious under 35 U.S.C. §§ 102 or 103. Assuming the PTAB was correct in its holding, it raises the question: does a ruling of non-obviousness necessarily mean that the patent contains an inventive concept?

Although there is some caselaw to suggest that obviousness, novelty, and eligibility inquiries overlap, the most recent and persuasive opinions conduct the eligibility inquiry in isolation. *Compare Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) (stating that the eligibility analysis is "facilitated by considerations" of §§ 102 and 103), *with Netflix, Inc. v. Rovi Corp.*, 114 F. Supp. 3d 927, 937 (N.D. Cal. 2015), *aff'd* No. 2015-1917, 2016 WL 6575091 at *1 (Fed. Cir. Nov. 7, 2016) ("Notably, the search for an 'inventive concept' places no importance on the novelty of the abstract idea. A novel idea is still an abstract idea, and is therefore unpatentable."), *and Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, No. 2015-1180, 2016 WL 6440387, at *19 (Fed. Cir. Nov. 1, 2016) (Reyna, J., dissenting) ("The inventiveness inquiry of § 101 should therefore not be confused with the separate novelty inquiry of § 102 or the obviousness inquiry of § 103.").

The Supreme Court has embraced this distinction as well. *See Diehr*, 450 U.S. at 190 (“The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter.”) (citations and quotation marks omitted). Indeed, in *Alice* itself, the Court did not ask whether using a computer to perform intermediated settlements was novel; converting the decades-old human practice of performing an intermediated settlement to a computer program may well have been an improvement over the prior art. Instead, the focus was on the lack of an “inventive concept” that narrowed the scope of the patented idea. Thus, novelty and obviousness questions did not factor into the eligibility discussion.

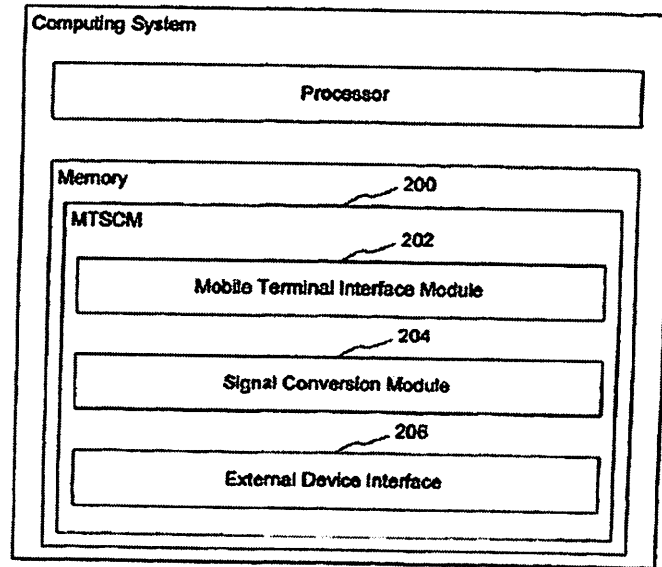
That is not to say that the §§ 102 and 103 analyses are completely irrelevant to the eligibility question. Indeed, the same component or claim that distinguishes the invention from the prior art may also provide the “innovative concept” that directs the claims to patent-eligible subject matter. The legal focus, however, is slightly different. The obviousness and novelty questions ensure that a patent holder does not unfairly piggy-back on, or overlap with, *past* invention. That, in turn, ensures that inventors enjoy the full benefits of their existing patents. On the other hand, the eligibility framework focuses on whether *future* invention will be unduly preempted by effectively allowing an idea to be patented. This distinction is supported by the Federal Circuit’s conclusion that patent eligibility is a question of law, while obviousness is a mixed question of law and fact. *See MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1167 (Fed. Cir. 2015). As a pure question of law, the eligibility inquiry does not examine what a “particular reference discloses . . . [or] whether there was a reason to combine certain references.” *Id.* Instead, it deals with the separate and forward-looking concerns over preemption.

This conclusion means that the USPTO's *inter partes* decisions do not provide an answer to the question at hand. What those opinions do, however, is highlight the aspects of the '492 patent family that might constitute an "innovative concept" under step two of *Alice*. They are: (1) the MTSCM and (2) the power-supply system to that device. These components are addressed in turn, followed by a discussion of the claims as an ordered combination.

b. The MTSCM

Because neither the "mobile terminal" nor the "alternative display device" is limited in any meaningful way by the patents' claims, the step-two analysis centers on the MTSCM. This "intermediary device" is "interposed between a cell phone or personal digital assistant and a high definition digital display that performs recited processing of video signal." *See* Opp'n at 19 (discussing claims 28-33 of the '814 patent). According to the PTAB *inter partes* decisions, the intermediary device contained two elements not taught in the prior art: "(1) converting [the multimedia signal] . . . to a display format . . . that is different from the compression format; and (2) [providing] a power level appropriate for driving the alternative display." *Id.* at 26 (quoting the PTAB decisions). Because these elements were not obvious under the prior art, Defendant asserts that the patent cannot be "conventional" for the purposes of a step-two analysis.

Replying to this argument, Amazon points out that the "novel" intermediary device is nothing more than a black box described in purely functional terms. A diagram of the device is produced below.



U.S. Patent No. 7,899,492 fig. 2.

An examination of this figure confirms that the MTSCM indeed describes an ends rather than a means. For example, the signal conversion module (204) “recognizes the multimedia signal format and processes the multimedia signal to provide a converted signal.” *Id.* at 5:24-27. This explanation does not describe how the signal is converted. Instead, it merely directs the reader to design a product that would convert the signal in an appropriate fashion. Further, the MTSCM (200) itself can be provided “as software, firmware, hardware, or any combination thereof.” *Id.* at 4:45-48. In addition, “the described functionality can be provided by an MTSCM having fewer, greater, or differently named modules.” *Id.* at 4:55-60. Thus, in effect, the MTSCM can be provided by anything that achieves the claimed result, so long as the video signal is compressed and decompressed.

Because the MTSCM only contains functional language rather than specific instructions, the patents do not add any inventive concept to the abstract plan to convert a video image from a mobile screen to a television. In addition to Claim 23 (recited above), Claim 12 of the '492 patent highlights this fact. It claims a system that comprises:

[a] means for processing the video signal to produce a converted video signal for use by the alternative display terminal, wherein processing by the means for processing the video signal includes converting the video signal from a compression format appropriate for the mobile terminal to a display format for the alternative display terminal that is different from the compression format, such that the converted video signal produced by the means for processing the video signal comprises a display format and a power level appropriate for driving the alternative display terminal . . .

'492 Patent. In plain English, this means that the claimed system uses the signal received on a mobile phone and converts it to a signal and power level appropriate for a television.

The claim does not specify the power level or the conversion method, aside from the fact that the signal is "compressed." Indeed, in its previous consideration of these patents, the Federal Circuit could not even tell what the "display format" was by examining the claim language. It wrote: "although the intrinsic evidence strongly suggests that the claimed 'display format' must be a video signal that is 'ready for use' by a conventional external monitor, the intrinsic evidence before us does not provide a complete understanding of the term." *Virginia Innovation Sciences, Inc. v. Samsung Electronics Co.*, 614 Fed. App'x 503 (Fed. Cir. 2015). The intrinsic evidence does not provide an understanding of the term because the "ready for use" display format, like the MTSCM generally, is purely functional. Even if a "ready for use" display format was the appropriate construction of the term, the scope of that term would necessarily be dependent on the type of display device being used. As such, the purportedly novel MTSCM, like the "display format," describes an ends that could be performed in any number of ways by a variety of devices that had yet to be invented when the patents were filed.

To emphasize this point, it is worth noting that VIS does not argue that the MTSCM itself is novel or patent-eligible. Instead, the device compresses and decompresses data in an apparently conventional manner. The only thing that changed was the *type* of data being processed. The design of the MTSCM is not inventive; only the placement of the MTSCM

between the mobile phone and the television makes it novel. As such, it is analogous to the computer in *Alice*, which was not considered innovative simply because it performed an old task (intermediated settlement) with new technology. Neither MTSCM's technology nor its function is claimed to be innovative. It is instead an example of abstract ideas repackaged in conventional technology. This is precisely the result that *Alice* sought to avoid.

VIS's position at oral argument helps to illustrate this point. In replying to Amazon's assertions that the MTSCM was claimed in purely functional terms, counsel for VIS stated:

[T]here seems to be a suggestion that the only way this would work or should be patentable is if we used a proprietary compression scheme or a proprietary encoding scheme . . . **but that thwarts the entire purpose of the invention.**

"The purpose of the invention is the inventors realized, you have a cell phone and you've spent 1,000 or \$2,000 on your HDTV, how do you get them to talk? And **if we came up with a proprietary compression scheme, it would be pointless**, or a proprietary encoding scheme. So we talked about things that would actually be useful to solve this real world problem."

Oral Arg. Tr. at 23 (Dkt. No. 43) (emphasis added). Thus, in VIS's words, a proprietary compression scheme would "be pointless" because it would leave out some phones and some televisions. This would thwart the "*purpose of the invention*," which is to convert *any* mobile video signal to *any* HDTV. What this means in practice, however, is that the entire field of mobile-to-HDTV video conversion through an intermediary device is preempted, regardless of brand, bandwidth, model, or type of video. Although this may have been a "real world problem," the proposed method for solving this problem is far too broad.

In this respect, VIS's citation to Claims 28-33 of the '814 patent does not save its argument. These claims describe the "high definition multimedia interface, maximum throughput rate, power provision, decoder, [and] encoder," which, VIS argues, all help narrow the scope of the invention. Opp'n at 19. As with the claim language from the '492 patent,

however, these claims are cast in purely functional terms. The decoder is “configured to perform said decompressing,” the encoder is “configured to perform said encoding,” the high-definition multimedia interface (HDMI) is “configured to transmit the encoded digital signal,” and the maximum throughput rate simply describes HDMI signal. ’814 Patent. Thus, rather than instructing how to achieve the claimed result, the ’814 patent simply recites an abstract idea, then lists a series of components and says “configure them.” *See Alice*, 134 S.Ct. at 2357 (“[T]ransformation into a patent-eligible application requires more than simply stating the abstract idea while adding the words ‘apply it.’”) (internal citations and quotation marks omitted).

c. The Power Supply System

This leaves the power system, which is an aspect of the MTSCM. In the *inter partes* review of the ’711 patent, the USPTO wrote: “Neither Petitioner nor Dr. Almeroth explain how a person of ordinary skill in the art would output a video signal at ‘a power level appropriate for driving the alternative display.’” Opp’n, Ex. 7 at 17 (Dkt. No. 36). Much like the patents’ instructions on “configuring” a decoder, describing a “power level appropriate for driving the alternative display” does not narrow the scope of this power supply in any meaningful way, shape, or form. An “appropriate” power level is simply a power level that works; nothing in the patent scratches below that surface description. As discussed above, the fact that this was not taught in the prior art does not change that conclusion.

An example drawn from the ’814 patent (quoted at length above) further demonstrates the functional nature of these claims. VIS describes the patent as follows: “in order to power the intermediary device, the device is configured to receive power through a wired connection (claim 28) for use in processing the received multimedia signal (claim 30), while the encoded digital

signal is transmitted to the high definition digital display through the high definitional multimedia interface of the apparatus (claim 28).” Opp’n at 20 (discussing the ’814 patent). Though these terms are technical, the power system is simple: the cord that transmits the converted signal from the intermediary device to the television also provides power from the television to the intermediary device. As with the MTSCM, there is no further description as to how this power transfer should be achieved. There is no cable design, specified power level, or anything else that narrows the claim. Instead, it leaves the problem for future inventors to decide what power level is “appropriate.” Though this idea may be creative, it is most certainly not an inventive concept that “in practice amounts to significantly more than a patent upon the [abstract idea] itself.” *Alice*, 134 S.Ct. at 2355.

d. Ordered Combination

In its briefing, VIS clings tightly to the Federal Circuit’s instruction that “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Bascom*, 823 F.3d at 1350. Thus, it argues that, even if the individual claims are not considered “inventive concepts,” the organization of these claims in a novel fashion constitutes an inventive concept that survives step two. The Court disagrees.

The “ordered combination” language was first announced in *Mayo*, but it can be fairly traced to the Supreme Court’s 1981 holding in *Diehr*. *Mayo*, 132 S. Ct. at 1298 (citing *Diehr*, 450 U.S. at 188). In *Diehr*, the patented process included: “installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and automatically opening the press at the proper time.” *Diehr*, 450 U.S. at 187. Thus, each step of the process was detailed and the claimed steps together achieved a specific result. Distinguishing *Diehr*, the

Court in *Mayo* explained that the “patentees [in *Diehr*] did not ‘seek to pre-empt the use of [the] equation,’ but sought ‘only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process.’” *Mayo*, 132 S. Ct. at 1299 (quoting *Diehr*, 101 S.Ct. at 1048). Thus, for the “ordered combination” language to apply, each component of the combination must be specific (though not necessarily novel), and the result must be innovative in its own right. *See id.*

Since *Mayo*, the ordered combination language has been frequently quoted, but seldom applied. The recent Federal Circuit opinion in *Bascom* provides the clearest example of an ordered combination of claims amounting to an “inventive concept.” *Bascom*, 827 F.3d at 1345.

The inventive concept described and claimed in the ’606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server. BASCOM explains that the inventive concept rests on taking advantage of the ability of at least some ISPs to identify individual accounts that communicate with the ISP server, and to associate a request for Internet content with a specific individual account.

Id. at 1350. Thus, the patent claims capitalized on the unique characteristics of specific ISP servers in order to produce an entirely new way of filtering content on the Internet. Critical to *Bascom*’s eligibility determination was the fact that the claims “recite[d] a *specific, discrete implementation* of the abstract idea of filtering content.” *Id.* (emphasis added). The claims “carve[d] out a specific location for the filtering system (a remote ISP server) and require[d] the filtering system to give users the ability to customize filtering for their individual network accounts.” *Id.* at 1352. In other words, each one of the steps in the “ordered combination” was specific, and their organization created a narrow solution to a computer-centric problem. *See id.*

The same cannot be said of the ’492 patent, which relies on generic video signals, generic mobile devices, generic display monitors, and a functional conversion process. Nothing about

the '492 patent is either specific or discrete. For the '492 patent to fall under the purview of *Bascom*, it would require a patent that utilized a discrete characteristic of an Amazon (or HTC or Samsung) mobile device to improve transmission of the mobile signal to an alternative display in a specific manner. Such a modification could conceivably render the claims patent-eligible because it would “carve out a specific” method of converting mobile video streams rather than claiming a functional method that covers all mobile devices and display devices. *Id.* at 1352. Conversely, to make the *Bascom* patent more analogous to the '492 patent family, one could imagine a patent on an Internet filtering tool that applied to *any* ISP server and *any* end user. Under the terms of *Bascom*, however, that hypothetical claim language would render the patent ineligible because it is “not limited to a *specific* technical solution of the abstract idea.” *Id.* (emphasis added).

In addition to distinguishing *Bascom*, analogous caselaw compels a finding of ineligibility here. The Federal Circuit has been consistent in holding patents ineligible when the claims at issue use only broad functional language. In particular, the functional claims in this case appear similar to those in *Internet Patents*, where the mechanism for avoiding data loss in web browsing was “not described, although this [was] stated to be the essential innovation.” 790 F.3d at 1348. This was illustrated in the claim language, which recited “[a] method of providing an intelligent user interface to an online application comprising the steps of . . . maintaining said state upon the activation of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state.” *Id.* at 1344–45. Thus, in *Internet Patents*, the purpose of the invention was to enable “using the back and forward buttons without losing data,” however the patent did not describe how to accomplish this feat.

Those facts parallel the claims in the instant case. Even under the PTAB's decisions, the '492 patent's crucial improvements on the prior art were (1) the compression and decompression of the data in the conversion process and (2) the supply of power to the intermediary device. As discussed above, these "innovative concepts" are not described in anything more than functional terms, despite the fact that they are critical to the "innovation" claimed by the patent. *See Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) (finding that a patent on wirelessly delivering broadcasted content to an electronic device in a different region was ineligible when it contained only "a broad and familiar concept concerning information distribution that is untethered to any specific or concrete way of implementing it").

This conclusion is further supported by *TLI* and *Electric Power*, where the Court held that when claims are laid out in purely functional language and use conventional technology in a typical manner, they are not patent eligible as an "ordered combination." In *TLI*, the court examined each component of the proposed invention to see whether it contained an inventive concept in its own right. 823 F.3d at 611. There, the telephone and server were not used in any unique context or for any unique function. Instead, the phone constituted the environment in which the photo organization took place and the server performed conventional functions such as receiving data, extracting information from that data, and storing images. *Id.*; *see also Electric Power*, 830 F.3d at 1355 ("Nothing in the claims . . . requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.").

Similarly here, the mobile network, the phone, the intermediary device, and the display monitor all perform their conventional functions. There is no contention that the MTSCM's data compression or conversion was unknown in the prior art; VIS only argues that it was unknown in

this context. Moreover, the process for “converting” and “compressing” signals is described in purely functional terms, without any algorithm or code for achieving those results. VIS asserts that adding the intermediary device to a method of transmitting a video signal from a network to a display device through a mobile device is in itself an inventive concept. However, this leap stretches the bounds of patent eligibility. Rather than creating an innovative “ordered combination,” the MTSCM’s placement between ubiquitous conventional devices preempts future innovation in the field of mobile-to-HDTV conversion. Because preemption remains the guiding principle of the § 101 inquiry, the functional claims of the patents in the ’492 patent family drive at the very heart of § 101 concerns and they must be found ineligible.

V. CONCLUSION

Instead of claiming a technological building block, the ’492 patent family’s abstract claims place a ceiling on future innovation. The concept of converting a mobile video signal to an HDTV is an abstract concept, and neither the patents’ individual claims nor their ordered combination can save it from that conclusion. As such, Amazon’s motion to dismiss is **GRANTED** in full. An appropriate order shall issue.

January 5, 2017
Alexandria, Virginia



Liam O’Grady
United States District Judge